

Zoooooooooom! How fast is fast?

Objectives

- Identify how to determine an object's speed
- Understand the difference between speed and velocity

Pre-Lab Questions

1. What is a reference point?
2. What two things must you know to determine speed?
3. What is the difference between speed and velocity?

Lab Activity

Materials

- Toy car
- Meter stick
- Stopwatch
- Masking Tape

Procedure

1. Place a piece of masking tape on the floor and label it reference point.
2. Place the front of the car at the starting point
3. Group member 1 will count to three. On three, group member 2 will push the car and group member 3 will start timing.
4. At the moment the car stops, group member 3 will stop timing.
5. Mark the final location of the car and measure the distance (in meters) from the starting point.
6. In the table record the distance the car traveled and the time to travel that distance.
7. Calculate speed.

Perform the procedures we determined as a class three times. Record all your data in table below. Be sure to include the units.

Trial Number	Distance	Time	Speed	Velocity
1				
2				
3				

Analyze and Conclude:

- 1) During the lab, how were you able to observe the difference between speed and velocity?
- 2) Why do you need to write both the speed and the velocity in the data table?
- 3) If we changed the distance in the experiment, how would that change the velocity?
- 4) Graph the table to show the slope of the car's velocity.